Attorney Docket No.: N1280-00670
App. Serial No.: 10/781,107

REMARKS

This reply is responsive to the non-office action mailed June 28, 2007 ("Office Action"). Claims 1, 4, 10, 15 and 20 have been amended to further clarify the invention claimed by the Applicant. Claims 1-20 remain pending in the application. Entry of this amendment and reconsideration with a view towards allowance is respectfully requested in light of the following remarks.

CLAIMS REJECTIONS

Rejections under 35 U.S.C. § 102

Claims 1-20 stand rejected as being anticipated by United States Patent 5,795;688 to Burdorf ("Burdorf") under 35 U.S.C. 102(b). Claims 1, 10, 15, and 20 are independent. This rejection is respectfully traversed for the reasons presented below.

"A claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference." *Verdegaal Bros. v. Union Oil Co. of California*, 814 F.2d 628, 631, 2 USPQ2d 1051, 1053 (Fed. Cir. 1987). "The identical invention must be shown in as complete detail as is contained in the ... claim." *Richardson v. Suzuki Motor Co.*, 868 F.2d 1226, 1236, 9 USPQ2d 1913, 1920 (Fed. Cir. 1989).

Independent claims 1, 10, 15, and 20 are directed to a method of directly inspecting wafer features for defects on the actual wafer itself. As amended, claims 1, 10, and 15 require "acquiring at least one digitized image of at least one actual feature on the wafer taken directly from the wafer." Similarly, independent claim 20 requires "acquiring at least one digitized image of at least one actual circuit feature on the wafer taken directly from the wafer." Burdorf does not teach or fairly suggest such an inspection method as now further clarified by amended

claims 1, 10, 15, and 20. Accordingly, Burdorf fails to teach each and every element of these claims.

Burdorf is directed to a method of inspecting photomasks for defects that relies only on features produced on the mask itself, not by acquiring a digitized image of an "actual feature on the wafer taken directly from the wafer" (*see, e.g.*, Applicant's disclosue, paragraph 0012, second sentence; paragraph 0024, third sentence) as required by amended claims 1, 10, 15, and 20. Burdorf creates an aerial image 18 of an actual chrome feature 14 on the photomask (col. 3, lines 31-32 and 40-50, FIGS. 1 and 2). Aerial image 18 is created by shining a UV exposure light through the mask, creating an aerial image of mask chrome feature 14, and then capturing that aerial image on a UV sensitive CCD camera (col. 3, lines 40-50). This simulated feature 18 is then compared to a benchmark image 20 or 30. In contrast to Applicant's system as now claimed, aerial image 18 in Burdorf is not a digitized image of the actual feature on the wafer that has been produced by the mask. Therefore, the inspection method taught by Burdorf does not directly inspect the wafer itself and actual features produced thereon for defects as now clarified and claimed by the Applicant. Accordingly, Burdorf fails to teach each and every element of Applicant's claimed invention, and does not anticipate independent claims 1, 10, 15, and 20.

Moreover, prior art photomask inspection systems like Burdorf that compare simulated mask aerial images, and not actual wafer features to design benchmarks, and their shortfalls, are specifically recognized and discussed in paragraphs 0006 and 0007 of Applicant's own Background section of the disclosure. Because these prior art systems like Burdorf do not inspect the actual circuit feature produced on the wafer that is created by the mask, these systems do not verify the actual wafer image directly back to the intended design layout (*see* Applicant's

paragraphs 0006-0007). Instead, the inspection method employed in Burdorf only compares a simulated mask aerial image captured by a CCD camera of how a mask feature might appear if and when eventually patterned on the wafer. Accordingly, because Burdorf is a photomask inspection method that is incapable of inspecting actual features on the wafer after printing using a photomask like Applicant's claimed invention, Burdorf cannot be used to detect wafer processing induced errors as specifically recited in Applicant's independent claim 15 and dependent claim 8, or circuit layout induced defects as specifically recited in independent claim 20 and dependent claim 9, that might occur when making circuit features on the wafer after patterning with a photomask (*see* Applicant's disclosure, paragraph 0029).

In sum, independent claims 1, 10, 15, and 20 as amended are believed to be allowable. Dependent claims 2-9, 11-14, and 16-19 depend respectively from claims 1, 10, and 15, and are believed to be allowable based on the allowability of the independent claims from which they depend and for the additional limitations added by these claims which further distinguish over Burdorf.

Applicant notes that dependent claim 4 has been amended to correct typographical errors. Applicant reserves the right to present arguments with respect to the dependent claims if required at a later time.

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CONCLUSION

In view of the foregoing, Applicants respectfully request reconsideration and allowance of all pending claims. If the Examiner disagrees with the allowability of the claims, Applicant respectfully requests a telephonic interview with the Examiner to resolve any remaining issues and expedite prosecution. The Examiner is kindly requested to contact the Applicant's undersigned representative at 215.979.1554 for that purpose.

Respectfully submitted,

Dated: September 26, 2007

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